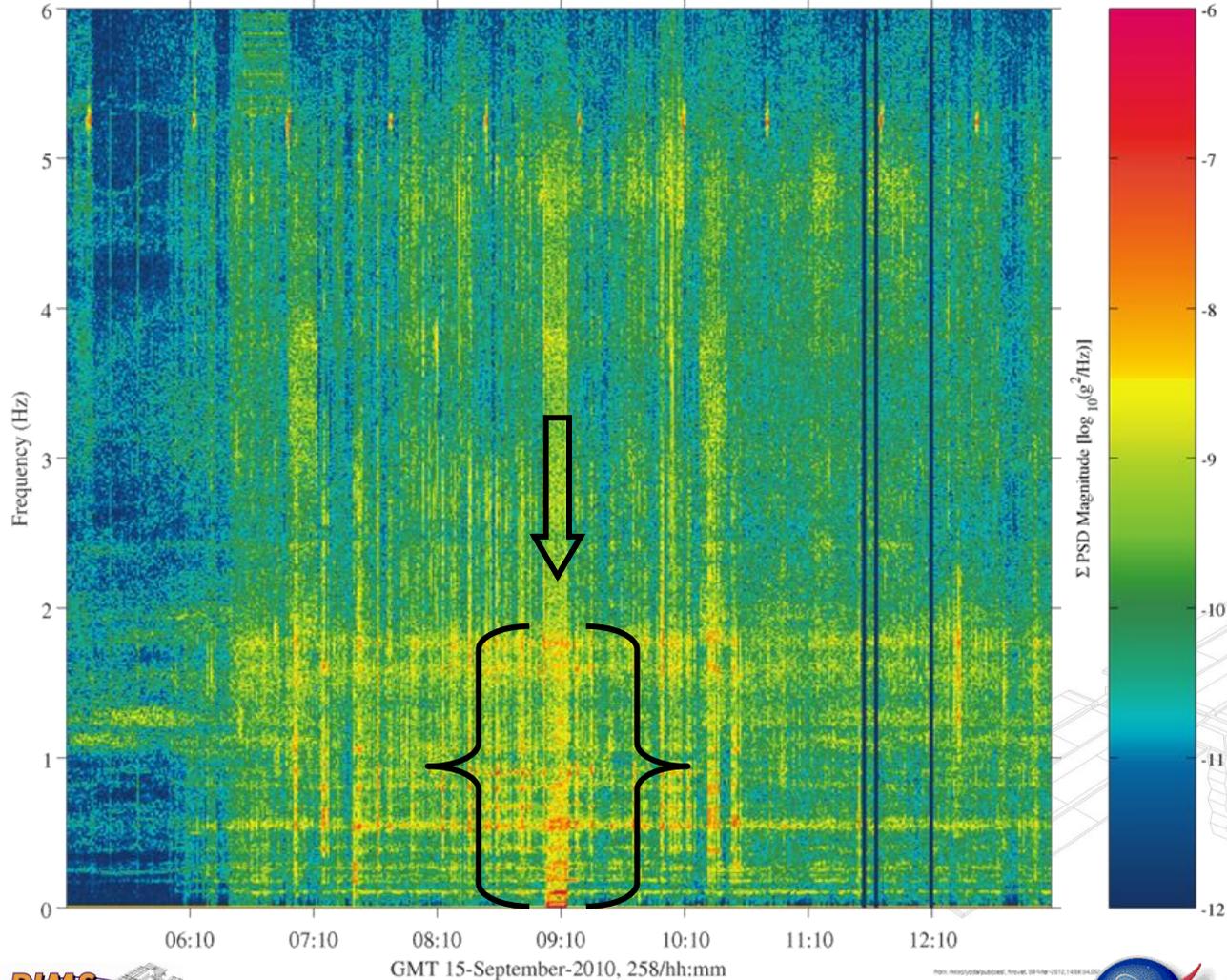


Progress Reboost 39P Qualify

sams2, 121f03006 at LAB1O1, ER2, Lower Z Panel[191.54 -40.54 135.25]
142.0000 sa/sec (6.00 Hz)
 $\Delta f = 0.009$ Hz, Nfft = 16384
Temp. Res. = 57.690 sec, No = 8192

Progress Reboost (39P)
Start GMT 15-September-2010, 258/05:10:00.005



Description	
Sensor	121f03 142 sa/sec (6 Hz)
Location	LAB1O1, ER2, Z-Panel
Plot Type	spectrogram

Notes:

- See more details and a comprehensive look at Progress reboost(s) in the handbook entry labeled simply “Progress Reboost” under the Quasi-Steady, Vehicle section of the web page where this entry was posted.
- In the vibratory regime, the primary impact of a Progress reboost is brief, heightened excitation of vehicle structural modes around 1 Hz. On a spectrogram, these show up as the nearly continuous yellow, horizontal streaks that tend toward orange/red when excited.
- As indicated by the arrow at the left (but better seen on the following pages), the reboost event takes place during the time span shown in this table:

GMT hh:mm:ss	Event
09:04:17	reboost starts
09:13:23	reboost ends



Acceleration Measurements Program



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Regime:	Vibratory
Category:	Vehicle
Source:	Reboost 39P

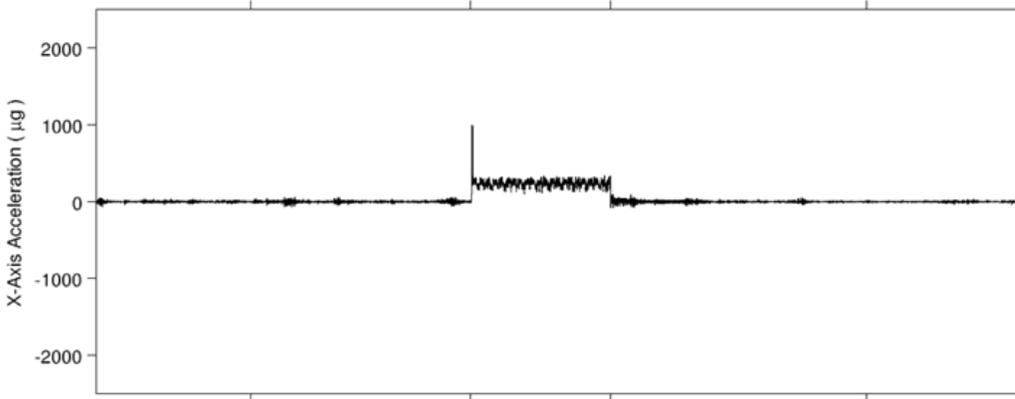
Progress Reboost 39P Quantify

mams_ossraw at LAB1O2, ER1, Lockers 3,4:[135.28 -10.68 132.12]
10.0000 sa/sec (1.00 Hz)

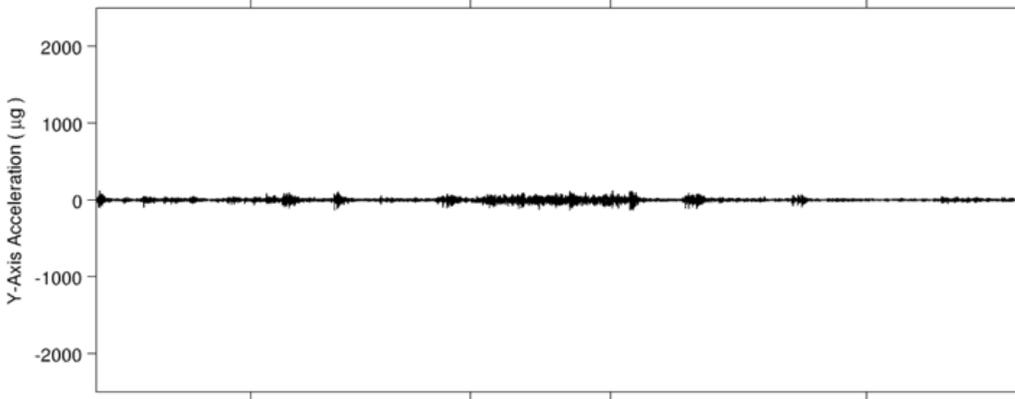
Progress Reboost (39P)

ossraw[90.0 0.0 0.0]

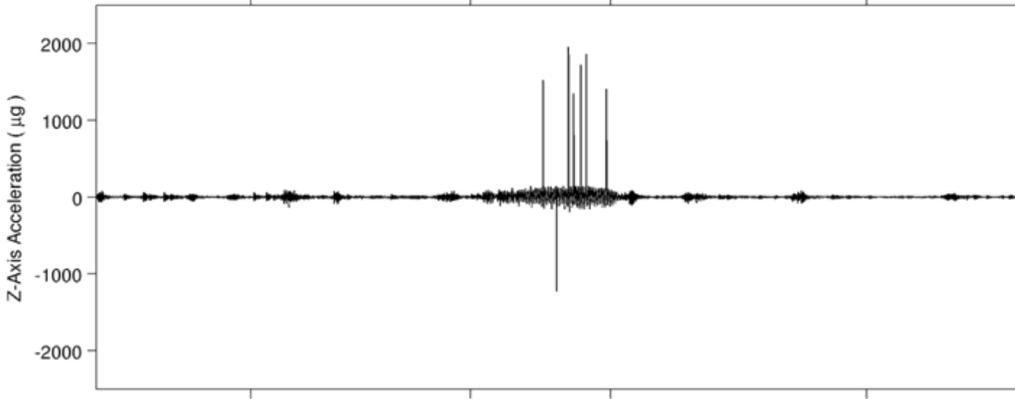
Start GMT 15-September-2010, 258/08:40:00.038



Mean = 35.3544 μg
RMS = 93.6485 μg



Mean = -0.8194 μg
RMS = 19.8165 μg



Mean = 1.8598 μg
RMS = 52.0671 μg

08:50:00 09:04:17 09:13:23 09:30:00 09:40:00
GMT 15-September-2010, 258/hh:mm

Description	
Sensor	OSS (raw) 10 sa/sec (1 Hz)
Location	LAB1O2, ER1
Plot Type	g vs. t

- NOTES:**
- All coordinate references are with respect to the Space Station Analysis (SSA) coordinate system.
 - Primary impact is on the X-axis as the reboost is intended to increase the velocity of the vehicle in that direction thus spiraling out/away from the Earth to boost the vehicle's altitude that otherwise continually decays over time.
 - Secondary impact is the brief transient (impulsive) accelerations that occur and as shown here are on the order of a few milli-g.
 - Transients from the thruster firings serve to: (1) keep the vehicle pointed in the desired direction, and (2) provide the necessary impetus for increasing its velocity.



Acceleration Measurements Program



Glenn Research Center

Regime:	Quasi-steady
Category:	Vehicle
Source:	Reboost 39P

Progress Reboost 39P

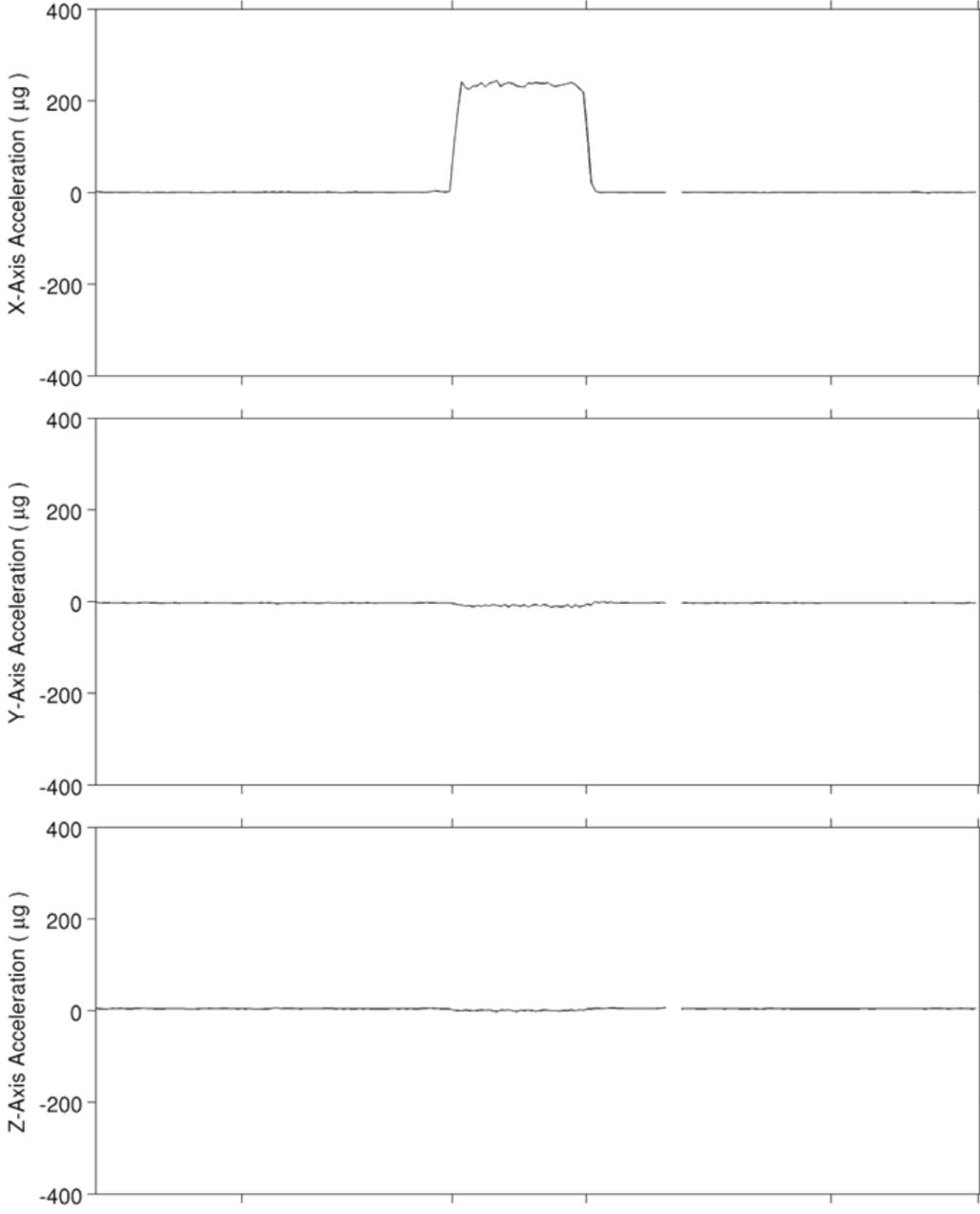
Quantify

mams_ossbtfm mapped to scan_testbed_doi[20.55 -932.13 -273.93]
0.0625 sa/sec (0.01 Hz)

Progress Reboost (39P)

SSAnalysis[0.0 0.0 0.0]

Start GMT 15-September-2010, 258/08:40:06.191



Description	
Sensor	OSS (TMF) 0.0625 sa/sec (0.01 Hz)
Location	Scan Testbed doi
Plot Type	filtered & mapped g vs. t

NOTES:

- These data have been “trimmed-mean filtered” (TMF) and mathematically mapped to the Scan Testbed datum of interest location.
- Note again that the primary impact is a brief step up in the X-axis acceleration level during the reboost event of just over 200 ug on that axis for about 10 minutes.



Acceleration Measurements Program



Glenn Research Center

Regime:	Quasi-steady
Category:	Vehicle
Source:	Reboost 39P